1. (CANCELED)

2. (CURRENTLY AMENDED) ~~The indicia of claim 1 wherein~~ An indicia for marking on an object for representing selected information, comprising:

a multi-dimensional array of encoded marks, including

an encoded pattern of the encoded marks determined by a holographic algorithmic transformation of the encoded marks, wherein

the encoded marks are determined by spectral encoding variables representing the selected information and each spectral variable is spectrally distinguishable from other of the spectral variables, and

the encoded pattern is an encoded hologram multi-dimensional barcode.

3. (CURRENTLY AMENDED) ~~The indicia of claim 1, wherein~~ An indicia for marking on an object for representing selected information, comprising:

a multi-dimensional array of encoded marks, including

an encoded pattern of the encoded marks determined by a holographic algorithmic transformation of the encoded marks, wherein

the encoded marks are determined by spectral encoding variables representing the selected information and each spectral variable is spectrally distinguishable from other of the spectral variables, and

the encoded pattern is an encoded barcode.

4. (PREVIOUSLY PRESENTED) The indicia of claim 2 wherein a spectral encoding variable is one of a wavelength of radiation used in encoding a hologram and a working distance of a hologram.

5. (PREVIOUSLY PRESENTED) The indicia of claim 2 wherein each encoding spectral variable has a unique effect in determining the encoded pattern of marks.

6. (PREVIOUSLY PRESENTED) The indicia of claim 3 wherein a concentric circular barcode comprises an array of concentric ring patterns wherein each ring pattern is a circular based intensity encoding of a corresponding information item.

7. (CURRENTLY AMENDED) The indicia of claim [[1]] 2 wherein the selected information is encoded by one of a binary phase Fourier, DOE, CGH, Lohmann, Lee, Fourier, Fraunhofer, Fresnel and kinoform type of hologram encoding algorithm.

8. (CURRENTLY AMENDED) The indicia of claim [[1]] 2 wherein [[an]] the indicia is formed on a surface of an object by deposition of a material on the surface.

9. (CURRENTLY AMENDED) ~~The indicia of claim 1 wherein~~ An indicia for marking on an object for representing selected information, comprising:

a multi-dimensional array of encoded marks, including

an encoded pattern of the encoded marks determined by a holographic algorithmic transformation of the encoded marks, wherein

the encoded marks are determined by spectral encoding variables representing the selected information and each spectral variable is spectrally distinguishable from other of the spectral variables, and

[[an]] the indicia is imprinted in a marked surface of an object by physical impact of a marking indicia that is an inverse image of the indicia.

10. (CURRENTLY AMENDED) ~~The indicia of claim 1 wherein~~ An indicia for marking on an object for representing selected information, comprising:

a multi-dimensional array of encoded marks, including

an encoded pattern of the encoded marks determined by a holographic algorithmic transformation of the encoded marks, wherein

the encoded marks are determined by spectral encoding variables representing the selected information and each spectral variable is spectrally distinguishable from other of the spectral variables, and

[[an]] the indicia is formed on a surface of an object by removal of selected areas of surface material representing an image of the indicia.

11. (CURRENTLY AMENDED) The indicia of claim [[1]] 2 wherein [[an]] the indicia is comprised of a plurality of spectrally distinguishable layers superimposed on a surface of an object.

12. (PREVIOUSLY PRESENTED) The indicia of claim 11 wherein a layer of the indicia is formed in a surface material of the object by one of removal of selected areas of the surface material and by physical impact of a marking indicia that is an inverse image of the indicia.

13. (PREVIOUSLY PRESENTED) The indicia of claim 9 wherein the object is a cartridge case and the marking indicia is located on a marking surface of a firearm.

14. (PREVIOUSLY PRESENTED) The indicia of claim 13 wherein the marking indicia is formed in the marking surface.

15. (PREVIOUSLY PRESENTED) The indicia of claim 13 wherein the marking indicia is formed in an impact face of a marking insert embedded in the marking surface.

16. (CANCELED)

17. (CURRENTLY AMENDED) ~~The method for creating an indicia for marking on an object for representing selected information of claim 16 wherein~~ A method for creating an indicia for marking on an object for representing selected information, comprising the steps of:

generating a multi-dimensional array of encoded marks by

determining each encoded mark according to spectral encoding variables representing the selected information, wherein

each spectral variable is spectrally distinguishable from others of the spectral variables representing variables,

forming an encoded pattern of the encoded marks by a holographic algorithmic transformation of the encoded marks,

forming an image of the encoded pattern to be marked on a surface of the object, and

the encoded pattern is an encoded hologram multi-dimensional barcode.

18. (CURRENTLY AMENDED) ~~The method for creating an indicia for marking on an object for representing selected information of claim 16 wherein~~ A method for creating an indicia for marking on an object for representing selected information, comprising the steps of:

generating a multi-dimensional array of encoded marks by

determining each encoded mark according to spectral encoding variables representing the selected information, wherein

each spectral variable is spectrally distinguishable from others of the spectral variables representing variables,

forming an encoded pattern of the encoded marks by a holographic algorithmic transformation of the encoded marks,

forming an image of the encoded pattern to be marked on a surface of the object, and

the encoded pattern is an encoded barcode.

19. (PREVIOUSLY PRESENTED) The method for creating an indicia for marking on an object for representing selected information of claim 17 wherein a spectral encoding variable is one of a wavelength of radiation used in encoding a hologram and a working distance of a hologram.

20. (PREVIOUSLY PRESENTED) The method for creating an indicia for marking on an object for representing selected information of claim 17 wherein each encoding spectral variable has a unique effect in determining the encoded pattern of marks.

21. (PREVIOUSLY PRESENTED) The method for creating an indicia for marking on an object for representing selected information of claim 18 wherein a concentric circular barcode comprises an array of concentric ring patterns wherein each ring pattern is a circular based intensity encoding of a corresponding information item.

22. (CURRENTLY AMENDED) The method for creating an indicia for marking on an object for representing selected information of claim [[16]] 17 further comprising the step of conjoining an algorithm related artwork with the representing the selected information to be an integral part of the transformed holographic multi-dimensional array of encoded marks.

23-40. (CANCELED)

41. (PREVIOUSLY PRESENTED) A firearm firing pin anti-tampering marking indicia for marking an identification indicia representing selected information on a portion of a cartridge case, comprising:

a radial bar code residing on the circumference of an end section of a striking member of a firing pin,

the radial bar code including a plurality of grooves and lands extending from an end of the striking section impacting a portion of a cartridge case and along the striking member for a preselected encoding distance to mark the radial bar

code represented by the grooves and lands into the portion of the cartridge case, wherein

the encoding distance is selected such that removal of the radial bar code from the firing pin by removal of a portion of the striking section containing the radial bar code will render the firing pin incapable of impacting the cartridge case to fire the cartridge.

42. (PREVIOUSLY PRESENTED) The firearm firing pin anti-tampering marking indicia of claim 41 wherein a radial bar code comprises:

a start code,

a plurality of digit codes representing the information encoded in the radial bar code, and

and end code.

43. (PREVIOUSLY PRESENTED) The firearm firing pin anti-tampering marking indicia of claim 42 wherein a radial bar code further comprises:

a checksum code for error detection for the digit codes.

44. (PREVIOUSLY PRESENTED) The firearm firing pin anti-tampering marking indicia of claim 41 wherein the radial bar code is disposed along a least one straight peripheral edge of the end section of an elliptical firing pin.

45. (PREVIOUSLY PRESENTED) A firearm firing pin anti-tampering marking indicia for marking an identification indicia representing selected information on a portion of a cartridge case, comprising:

a marking indicia disposed in a circular pattern on an end face of a firing pin tip wherein

the circular pattern is centered about an axis of the firing pin, and

is physically encoded as a sequence of encoded bits recessed into a surface of an end face of the firing pin tip, the encoded bits being separated by encoded lands, such that

removal of the marking indicia from the firing pin by removal of a portion of the striking section of the firing pin tip will render the firing pin incapable of impacting the cartridge case to fire the cartridge.

46. (CANCELED)

47. (CURRENTLY AMENDED) The indicia for marking on an object for representing selected information of claim [[1]] 2, further comprising:

an artwork conjoined with the encoded marks represented the selected information so that the encoded pattern formed by the holographic algorithmic transformation of the encoded marks includes, as an entity, the artwork integrated with the encoded pattern of encoded marks.

48. (CURRENTLY AMENDED) The method of claim [[16]] 17 for creating an indicia for marking on an object for representing selected information, further the step of comprising:

conjoining an artwork with the encoded marks representing the selected information so that the encoded pattern formed by the holographic algorithmic transformation of the encoded marks includes, as an entity, the artwork integrated with the encoded pattern of encoded marks.